

Remarks:

Claims 13-15 and 17-28 are now pending in this application. Applicants have presented new claims 27 and 28 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner rejected claims 13 and 17-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 5,023,048 to Mardon et al. The Examiner rejected claims 13-15 and 17-26 under 35 U.S.C. 103(a) as being unpatentable over Japanese patent document 08-067954 to Nomoto et al. The Examiner rejected claims 13-15 and 17-26 under 35 U.S.C. § 103(a) as being unpatentable over Japanese patent document 02-159336 to Anada et al. The Examiner rejected claims 13 and 17-26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,912,935 to Isobe et al. The Examiner rejected claims 13 and 17-26 under 35 U.S.C. § 103(a) as being unpatentable over Mardon et al.

Mardon et al. does not disclose the present invention since, among other things, Mardon et al. does not disclose a cladding tube having the composition recited in the claims. Rather, the portion of Mardon et al. cited by the Examiner discloses a thin cladding tube outer layer. Therefore, this layer only constitutes a protective layer and not the main part of the cladding tube. Therefore, even if the alloy disclosed by Mardon et al. were the same as the present invention, Mardon et al. only discloses a thin protective layer of such an alloy.

Additionally, Mardon et al. does not disclose an alloy that includes 0.65-0.85 percent by

weight of tin, as recited in the claims. Rather, Mardon et al. discloses an alloy that includes a tin content 0.35-0.65 percent by weight. Similarly, the present invention provides an alloy that includes 0.65-1.6 percent by weight niobium. On the other hand, Mardon et al. discloses an alloy that includes 0.35-0.65 percent by weight niobium, if niobium is present, which Mardon et al. states is optional.

In view of the above, Mardon et al. does not disclose all elements of the present invention as recited in claims 13 and 17-26. Since Mardon et al. does not disclose all elements of the present invention as recited in claims 13 and 17-26, the present invention, as recited in presented claims 13-26, is not properly rejected under 35 U.S.C. § 102(b). For an anticipation rejection under 35 U.S.C. § 102(b) no difference may exist between the claimed invention and the reference disclosure. *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q. 841 (C.A.F.C. 1984).

Along these lines, anticipation requires the disclosure, in a cited reference, of each and every recitation, as set forth in the claims. *See Hodosh v. Block Drug Co.*, 229 U.S.P.Q. 182 (Fed. Cir. 1986); *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

A cladding tube with an outer protective layer over an inner layer such as that disclosed by Mardon et al. is typically referred to as a duplex cladding tube. The inner layer has good mechanical properties, while the outer layer has good resistance to corrosion. The alloy referred to by the Examiner only relates to the thin outer layer. Therefore, this layer only constitutes a

protective layer and not the main part of the cladding tube.

The inventors of the present invention have unexpectedly discovered that an alloy according to the present invention has good mechanical properties and, at the same time, good resistance to corrosion. Therefore, the present invention eliminates the need for a duplex cladding tube with an outer protective layer. Furthermore, as discussed above in detail, the composition of the alloy suggested by Mardon et al. differs from the composition of the present invention.

Nomoto et al. does not disclose the present invention since, among other things, Nomoto et al. does not disclose an alloy that includes 0.65-1.6 percent by weight of niobium. Rather, Nomoto et al. discloses an alloy that includes 0-1.0 percent by weight of niobium, as described in the "Constitution" of Nomoto et al. Additionally, Nomoto et al. suggests very wide ranges of a number of elements of the alloy. However, Nomoto et al. does not provide concrete examples of an alloy having compositions anywhere close to the composition of the alloy of the present invention.

Anada et al. does not disclose the present invention since, among other things, Anada et al. does not disclose an alloy that includes 0.3-0.6 percent by weight of iron. Rather, Anada et al. discloses an alloy that includes 0.05-0.50 percent by weight of iron, as described in the "Constitution" of Anada et al. Additionally, Anada et al. suggests very wide ranges of a number of elements of the alloy. However, Anada et al. does not provide concrete examples of an alloy having compositions anywhere close to the composition of the alloy of the present invention.

Isobe et al. does not suggest the present invention since, among other things, Isobe et al. suggests an alloy that includes iron in a range of 0.05-0.3 percent by weight. On the other hand, the present invention includes 0.3-0.6 percent by weight iron. Isobe et al. suggests a very broad range of tin content and does not include any suggestion that the narrow range included in the composition of the present invention provides any superior results. Furthermore, in the one concrete example described by Isobe et al., the contents of both tin and iron are far removed from the ranges according to the present invention.

As can be seen in the cited references and in the present invention, the amounts of the alloying materials are small. The alloying elements and amounts of the alloying elements provide the alloy with certain characteristics. Each cited reference suggests a composition and a set of described advantageous properties. Changing the amounts of the alloying elements alters the properties of the resulting alloy. As a result, it is not obvious to alter the small amounts of alloying elements since this would alter the characteristics of the alloy from those that any particular cited reference describes.

Furthermore, without knowledge of the present invention, it is not apparent that one skilled in the art would be motivated to alter the ranges of alloying elements in any of the cited references. It would require undue experimentation to mix and match the amounts of the alloying elements and determine the properties of the resulting alloy. Even if one skilled in the art were to experiment and alter the composition of any of the alloys suggested by the cited references, there is no suggestion that they would arrive at the composition of the present

invention. The number of references cited by the Examiner indicates the number of alloys having different compositions that exist and that have different properties. The present invention provides a new composition not suggested by the cited references and that has new and different properties.

All of the cited references attach significance to the concentration ranges of alloying elements and resulting alloy qualities. Altering the concentration ranges by picking and choosing various elements and concentration ranges as suggested by the Examiner is contrary to the teachings of each of the cited references. To alter the ranges would alter characteristics of the alloy. As a result, no motivation exists to alter the alloys as suggested by the Examiner. Such motivation is required. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

Furthermore, the specification of the present application attributes significance to the concentration ranges and the characteristics of the resulting alloy. For example, the Summary of the Invention is replete with descriptions of the significance of the concentration ranges. Although none of the references discloses or suggests the combination of alloying elements and concentration ranges recited in the claims, even if one concentration range of one element partially overlaps with or lies within one of the ranges in the one of the cited references, the present invention is still patentable since the specification describes unexpected properties in ranges claimed. *In re Geisler*, 43 U.S.P.Q.2d 1362 (Fed. Cir. 1997).

In view of the above, the references relied upon in the Office Action do not disclose or suggest patentable features of the present invention. Therefore, the references relied upon in the

Office Action do not anticipate or obviate the present invention. Accordingly, Applicants respectfully request withdrawal of the rejections based upon the cited references.

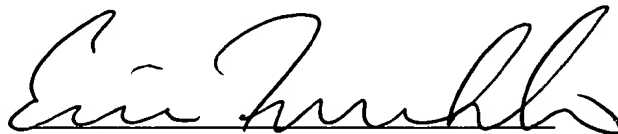
In conclusion, Applicants respectfully request favorable reconsideration of this case and early issuance of the Notice of Allowance.

If an interview would facilitate the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge insufficient fee and credit overpayment associated with this communication to deposit account no. 19-5127, Order # 19378.0011.

Respectfully submitted,

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